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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,800	01/04/2002	Robert P. St. Pierre	16159.035001; P6566	6933
32615	7590	09/08/2005	EXAMINER	
OSHA LIANG L.L.P./SUN 1221 MCKINNEY, SUITE 2800 HOUSTON, TX 77010			GERGISO, TECHANE	
			ART UNIT	PAPER NUMBER
			2133	
DATE MAILED: 09/08/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/037,800		PIERRE ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Techane Gergiso <i>T. G</i>		2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01/4/2002.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>08/05/02; 06/11/03</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1,15, 29 is rejected under 35 U.S.C. 102(b) as being fully anticipated by R. Woodburn and D. Mills herein after referred as Woodburn (Network Working Group Request for Comments: 1241).

As per claim 1:

Woodburn substantially teaches in the RFC 1241 of Internet Encapsulation Protocol that creating and assigning a virtual address to a client process (Page 2, Paragraph 9). The examiner interpreted the user space defined by Woodburn as any client, either a physical host or a process node having physical or virtual address respectively (Figure 1; Page 13, Section D; Figure 4). Woodburn teaches issuing a first Internet Protocol version compliant packet, wherein the first Internet Protocol version compliant packet comprises a security context (Figure 1; Figure 2); prepending an issued packet with a second Internet Protocol version header producing a second Internet Protocol version compliant packet (Figure 1; Figure 2; Page 4, Paragraph 3);

and forwarding the second Internet Protocol version compliant packet to a recipient (Figure 1, Page 5, Paragraph 1).

Woodburn substantially teaches also stripping away the second Internet Protocol version compliant header from the second Internet Protocol version compliant packet producing a stripped packet at the recipient (Page 9, Section 6; Figure 1); decrypting and authenticating the stripped packet using a particular method as indicated by the security context producing a decrypted and authenticated packet (Page 15, Section F). The examiner thinks that Woodburn provided clear indication on how to apply authentication and routing the decrypted packet to a recipient process using the virtual address (Page 12, Paragraph 7)

As per claim 15:

Woodburn substantially teaches in the RFC 1241 of Internet Encapsulation Protocol that an authentication server daemon that replies to a Supernet Attach Command (Page 15, Paragraph 3) and the examiner thinks that Woodburn provided clear indication on how to apply authentication. Woodburn teaches a virtual address daemon that maintains a mapping of the Supernet configuration information performing the following steps (Page 13, Paragraph 3; Page 14, Paragraph 2; Page 15, Paragraph 2) and the examiner interpreted, the virtual network or Internet with special encapsulation and virtual interfaces in combination with defined mapping function which

are disclosed by Woodburn, as a system that serves the purpose of the virtual address daemon.

Woodburn substantially teaches in the RFC 1241 of Internet Encapsulation Protocol that creating and assigning a virtual address to a client process (Page 2, Paragraph 9). The examiner interpreted the user space defined by Woodburn as any client, either a physical host or a process node having physical or virtual address respectively (Figure 1; Page 13, Section D; Figure 4). Woodburn teaches issuing a first Internet Protocol version compliant packet, wherein the first Internet Protocol version compliant packet comprises a security context (Figure 1; Figure 2); prepending an issued packet with a second Internet Protocol version header producing a second Internet Protocol version compliant packet (Figure 1; Figure 2; Page 4, Paragraph 3); and forwarding the second Internet Protocol version compliant packet to a recipient (Figure 1, Page 5, Paragraph 1).

Woodburn substantially teaches also stripping away the second Internet Protocol version compliant header from the second Internet Protocol version compliant packet producing a stripped packet at the recipient (Page 9, Section 6; Figure 1); decrypting and authenticating the stripped packet using a particular method as indicated by the security context producing a decrypted and authenticated packet (Page 15, Section F). The examiner thinks that Woodburn provided clear indication on how to apply

authentication and routing the decrypted packet to a recipient process using the virtual address (Page 12, Paragraph 7)

As Per claim 29:

Woodburn substantially teaches in the RFC 1241 of Internet Encapsulation Protocol that the RFC 1241 provides a means of performing encapsulation in the Internet environment (Page 4, Paragraph 1) and creating and assigning a virtual address to a client process (Page 2, Paragraph 9). The examiner interpreted the user space defined by Woodburn as any client, either a physical host or a process node having physical or virtual address respectively (Figure 1; Page 13, Section D; Figure 4). Woodburn teaches issuing a first Internet Protocol version compliant packet, wherein the first Internet Protocol version compliant packet comprises a security context (Figure 1; Figure 2); prepending an issued packet with a second Internet Protocol version header producing a second Internet Protocol version compliant packet (Figure 1; Figure 2; Page 4, Paragraph 3); and forwarding the second Internet Protocol version compliant packet to a recipient (Figure 1, Page 5, Paragraph 1).

Woodburn substantially teaches also stripping away the second Internet Protocol version compliant header from the second Internet Protocol version compliant packet producing a stripped packet at the recipient (Page 9, Section 6; Figure 1); decrypting and authenticating the stripped packet using a particular method as indicated by the security context producing a decrypted and authenticated packet (Page 15, Section F).

The examiner thinks that Woodburn provided clear indication on how to apply authentication and routing the decrypted packet to a recipient process using the virtual address (Page 12, Paragraph 7)

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2-13, 16-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodburn in view of Silvano Gai (IPv6 The new Protocol for Internet and Intranet, published 12/12/97, <http://www.IP.com>)

As per claim 2:

Woodburn does not explicitly teach that the first Internet Protocol is version 6. However, Silvano teaches that first Internet Protocol version compliant packet is Internet Protocol version 6 compliant packet (Page 230, Figure 2-12). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed by Woodburn that the first internet protocol is version 6. This modification would have been obvious because a person having ordinary skill in the art

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at the time of the invention was made, would have been motivated to do so since it is suggested by Woodburn (Page 15, Paragraph 2).

As per claim 3:

Woodburn does not explicitly teach that the second Internet Protocol is version 4. However, Silvano teaches that the second Internet Protocol version compliant packet is Internet Protocol version 4 compliant packet (Page 230, Figure 2-12). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed by Woodburn that the second internet protocol is version 4. This modification would have been obvious because a person having ordinary skill in the art at the time of the invention was made, would have been motivated to do so since it is suggested by Woodburn (Page 15, Paragraph 2).

As per claim 4:

Woodburn does not explicitly teach that the authentication server daemon. However, Silvano teaches the application of IPv6 security features applying AH and ESP using different ways (Page 160, Section 8.3) on the limitations of issuing the packet including executing a Supernet Attach Command with an authentication server daemon; responding to the Supernet Attach Command with a Supernet configuration information comprising the security context in the address; registering a mapping of the Supernet configuration information with a virtual address daemon. Therefore, it would



have been obvious to a person in the art at the time the invention was made to modify the method disclosed by Woodburn that issuing the packet to comprises daemon servers. This modification would have been obvious because a person having ordinary skill in the art at the time of the invention was made, would have been motivated to do so since it is suggested by Silvano (Figure 8, 9-13).

As per claims 5 and 19:

Woodburn does not explicitly teach that the security context address. However, Silvano teaches the application of IPv6 security features applying AH and ESP using different ways (Page 160, Section 8.3) addressing the limitations (virtual address, Supernet identity, and a channel identity). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed by Woodburn that the security context includes virtual address, Supernet identity, and a channel identity. This modification would have been obvious because a person having ordinary skill in the art at the time of the invention was made, would have been motivated to do so since it is suggested by Woodburn (Figure 4).

As per claims 6 and 20:

Neither Woodburn nor Silvano explicitly teach that the security context comprised of 128 bit unique value. However, using IPv6 packets, it is obvious and very well known to those skilled in the art that the claimed security context can be set to be comprised of

a 128 bit unique value for an intended purpose as evidenced by similar bit setting in Silvano (Page 156, Figure 8-5).

As per claims 7 and 21:

Neither Woodburn nor Silvano explicitly teach that the security context comprised of a 16 bit set and a 112 bit set. However, using IPv6 packets, headers and addressing, it is obvious and very well known to those skilled in the art that the claimed bit partition to be comprised of a 16 bit set and a 112 bit set value for an intended purpose as evidenced by similar bit setting in Silvano (Page 154, Figure 8-1).

As per claims 8 and 22:

Neither Woodburn nor Silvano explicitly teach that 16 bit set denotes a site local Internet protocol address comprising 12 bits for an address prefix followed by 4 bits for a zero value. However it is obvious and very well known to those skilled in the art that denoting a 16 bit set to a site Internet protocol address comprising 12 bits for an address prefix followed by a b4 bit of a zero value for an intended purpose as evidenced by similar bit setting in Silvano (Page 156, Figure 8-5).

As per claims 9 and 23:

Neither Woodburn nor Silvano explicitly teach that the 112 bit set comprises contiguous bits for the Supernet identifier, the Channel identifier, and the virtual

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address. However, it is obvious and very well known to those skilled in the art that the 112 bit can be set to be contiguous and partitioned for the Supernet identifier, the Channel identifier, and the virtual address for the intended purpose as evidenced on the specification of the application itself (Page 8, Paragraph 0030) which this letter is addressing.

As per claims 10 and 24:

Neither Woodburn nor Silvano explicitly teach that 112 bit set comprises 64 bits Supernet identifier, 24 bits Channel identifier, and 24 bits virtual address. However, it is obvious and very well known to those skilled in the art that the 112 bit can be set to be partitioned to 64 bits Supernet identifier, 24 bits Channel identifier, and 24 bits virtual address for the intended purpose as evidenced on the specification of the application itself (Page 8, Paragraph 0030) which this letter is addressing.

As per claim 11:

Woodburn does not explicitly teach that the virtual address daemon maps virtual addresses. However, Silvano teaches the virtual address daemon maps the virtual address of the recipient process within the Supernet to an actual Internet protocol address (Figure 8-11). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed by Woodburn that the virtual address daemon maps virtual addresses. This modification would have been

obvious because a person having ordinary skill in the art at the time of the invention was made, would have been motivated to do so since it is suggested by Woodburn (Page 4, Paragraph 3).

As per claims 12 and 26:

Neither Woodburn nor Silvano explicitly teach that the security context is encoded. However, it is obvious and very well known to those skilled in the art that the security context can be encoded according to a given standard format (encoding definition in American Heritage College dictionary).

As per claims 13 and 27:

The applicant of this application suggested that any packet management infrastructure may be used, appreciated by those skilled in the art, to obtain security context from the stripped packet using a handler mechanism (Page 9, Paragraph 0031). Therefore, it is obvious and very well known to those skilled in the art that the security context is obtained from the stripped packet using a handler mechanism.

5. Claim 14 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodburn in view of Gang et al (Mobile IPv6 solution based on Linux Netfilter framework Dai Gang; Ma Yan; Info-tech and Info-net, 2001. Proceedings. ICII 2001 - Beijing. 2001 International Conferences on Volume 5, 29 Oct.-1 Nov. 2001 Page(s): 306 - 310 vol.5)

As per claims 14 and 28:

Woodburn does not explicitly teach the handler mechanism is Netfilter. However, Gang teaches that the handler mechanism is a Netfilter (Diagram2). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed by Woodburn that the handler mechanism is Netfilter. This modification would have been obvious because a person having ordinary skill in the art at the time of the invention was made, would have been motivated to do so since it is suggested on the specification of the application itself (Page 8, Paragraph 0031) which this letter is addressing. .

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Loukola et. la . 0-8186-9014/98 IEEE

Teaches new possibilities offered by IPv6 on bringing security to the Internet in IP level. Major simplifications in IPv6 and it header extensions are also discussed.

- b. S.Kent, RFC 2402 1998

Discloses the security architecture applying the Encapsulating Security Payload (ESP) header in combination with the IP Authentication Header (AH) to provide security services in IPv4 and IPv6.

c. Rolf Oppliger 0018-9162/98 IEEE

Rolf teaches on security at Internet layer focusing on IP security architecture.

d. Samad et la. 0-7803-7565-3/02 IEEE

Discusses Internet protocol IP6, IPv4, transition tools, tunneling, encapsulation methods, and on how to deploy IPv6 over IPv4 tunnel

7. Any inquiry concerning this communication from the examiner should be directed to Techane Gergiso whose telephone number is (571) 272-3784. The examiner can normally be reached between 8:00am to 6:00pm. If any attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady, can also be reached on (571) 272-3819. The fax number is (703) 305-3718.

JOSEPH TORRES  
PRIMARY EXAMINER

T-G  
Techane Gergiso

Patent Examiner

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8/19/05